
-Supporting Information-

Real-Time Imaging Revealed That Exoelectrogens from Wastewater Are Selected at the Center of a Gradient Electric Field

Qing Du¹, Quanhua Mu², Tao Cheng¹, Nan Li³ and Xin Wang¹ *

¹ MOE Key Laboratory of Pollution Processes and Environmental Criteria / Tianjin Key Laboratory of Environmental Remediation and Pollution Control / College of Environmental Science and Engineering, Nankai University, No. 38 Tongyan Road, Jinnan District, Tianjin 300350, China

² Bioengineering Program, Department of Chemical and Biological Engineering, Hong Kong University of Science and Technology, Hong Kong, China

³ School of Environmental Science and Engineering, Tianjin University, No. 92 Weijin Road, Nankai District, Tianjin 300072, China

*Corresponding Author: Phone: (86)18722292585; fax: (86)22-23501117; E-mail: xinwang1@nankai.edu.cn

The supporting information contains 6 pages with 8 figures.

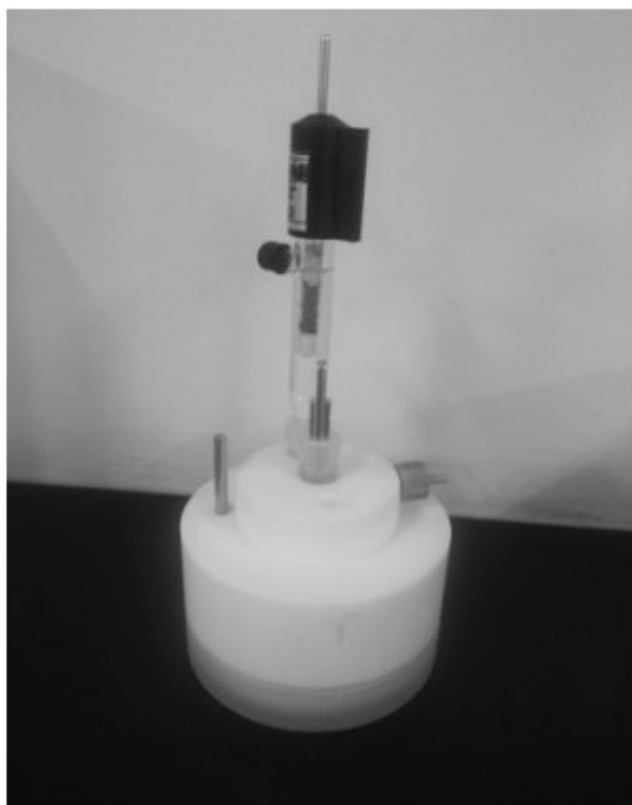


Figure S1. The photo of the BES reactor.

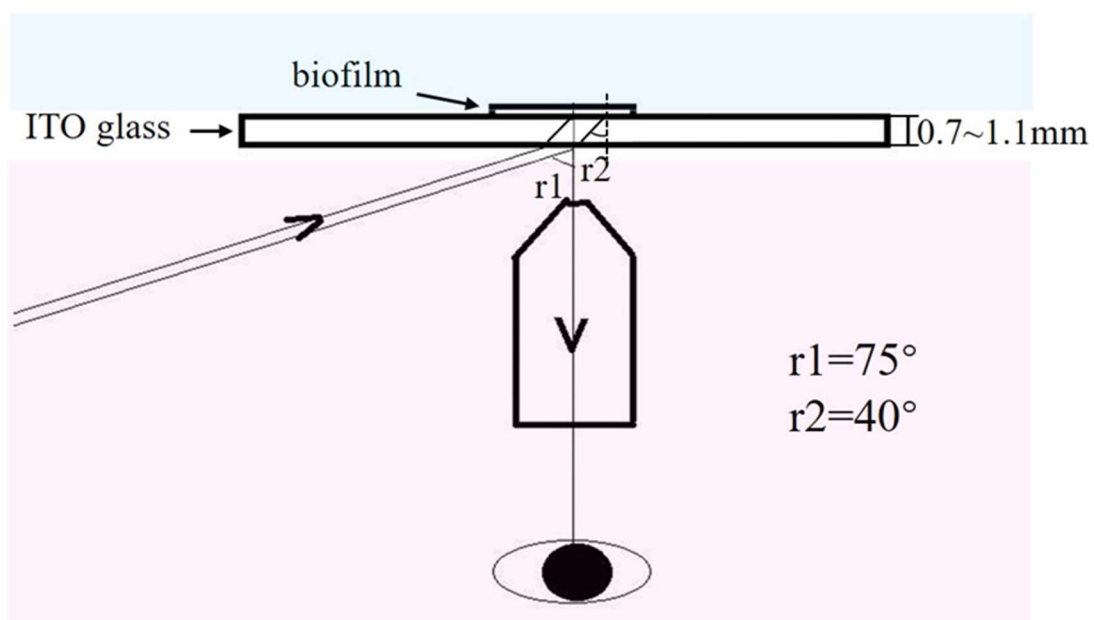


Figure S2. The optical path of the imaging system in Electro-visual system.

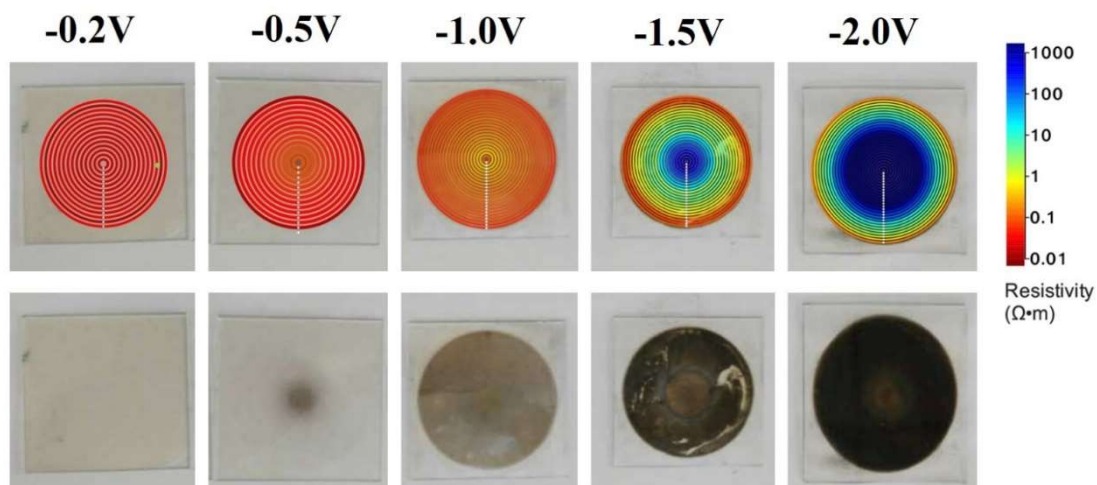


Figure S3. ITO glass etched at different potentials. Upper: Electric resistivity at the selected points were measured by four-point probe method, then the distribution of resistivity was extrapolated. Lower: photos of the etched ITO glasses.

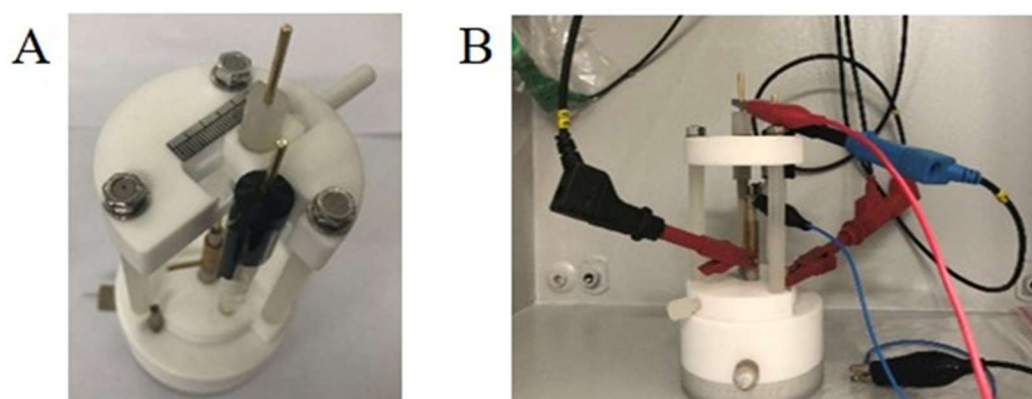


Figure S4. The photos showing the device for measuring EF.

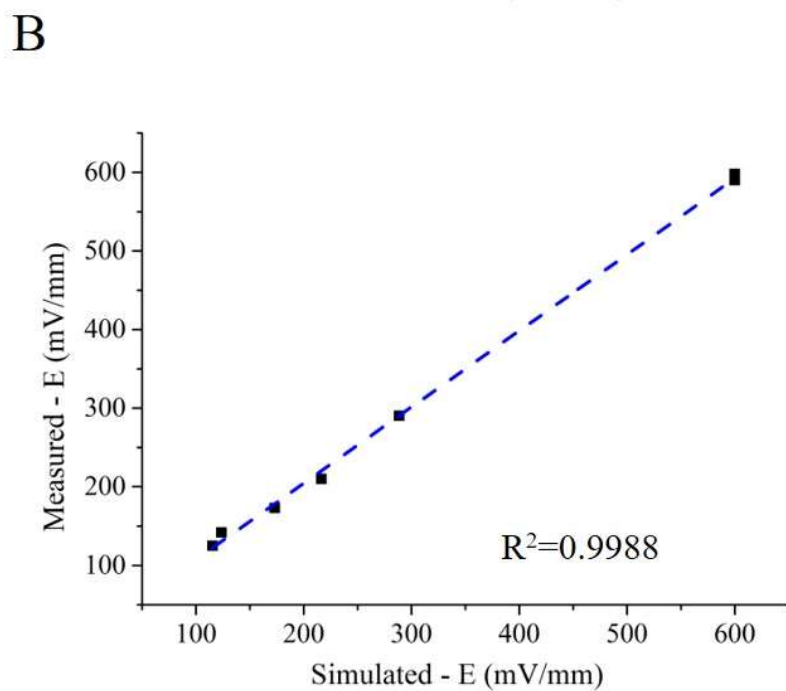
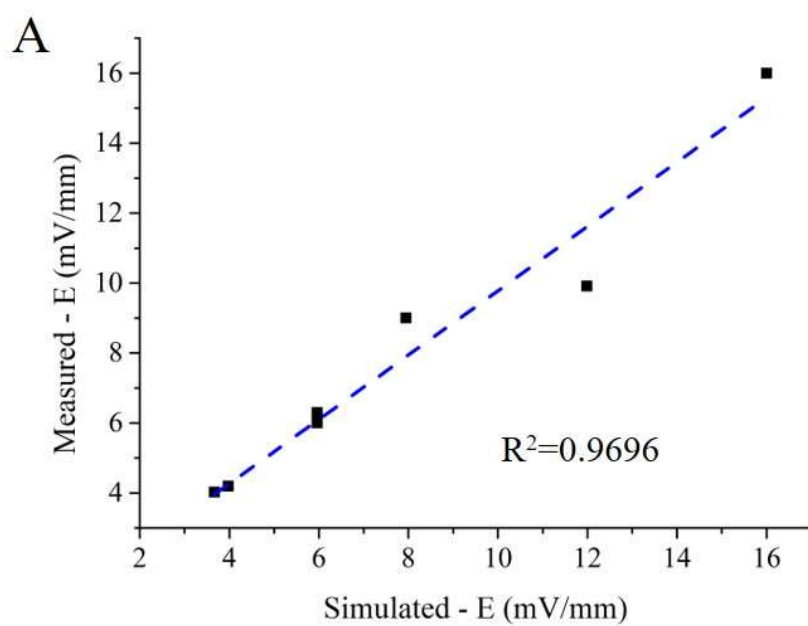


Figure S5. The linear fitting of measured-EF intensity and simulated EF intensity. (A) $I=1.65 \times 10^{-4}$ A resembling no biofilm cover. (B) $I=2 \times 10^{-3}$ A, resembling biofilm matured stage.

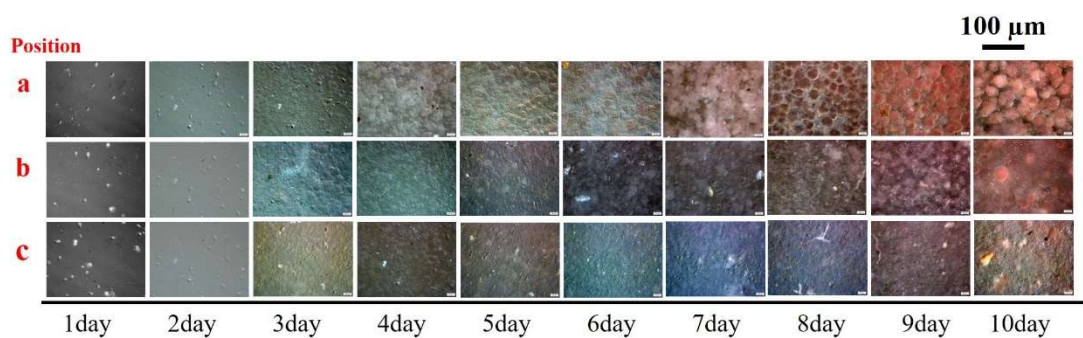


Figure S6. The growth of the biofilm at different positions on ITO glass. The true-color images using $40\times$ objective were taken by the Electro-visual system in 10 days at point a, b and c

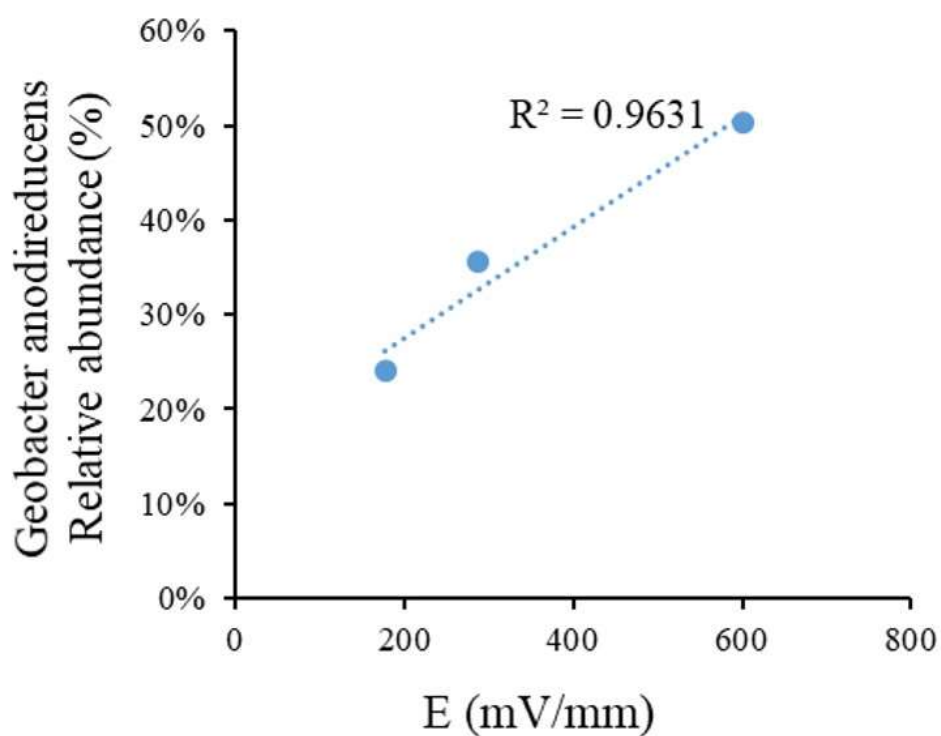


Figure S7. The linear fitting of *Geobacter anodireducens* relative abundance and simulated EF intensity.

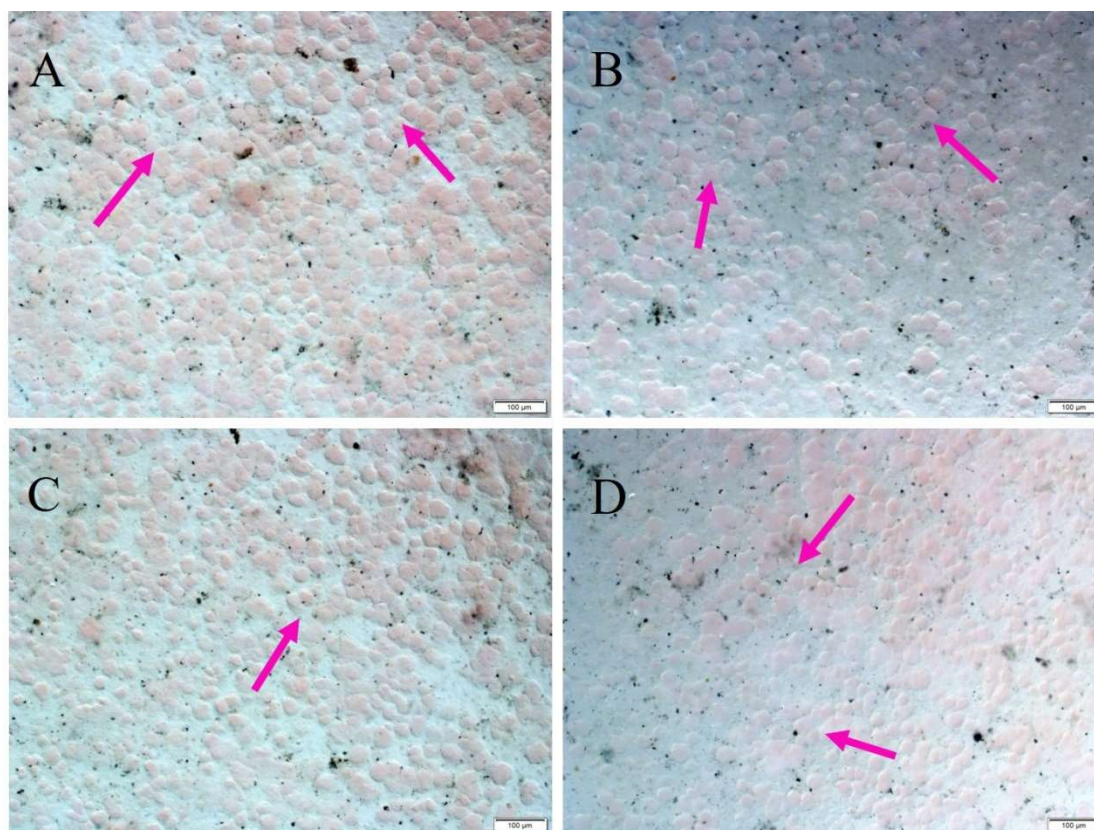


Figure S8. True color images ($10\times$ objective) of the biofilm at the center of the ITO glass. The pink arrows indicate the possible migration direction of microorganisms.